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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,323	08/20/2003	Ronald Roman	IJ0063USNA	6646

23906 7590 07/01/2004

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EXAMINER

FAISON, VERONICA F

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/644,323	Applicant(s) ROMAN ET AL.	
	Examiner Veronica F. Faison	Art Unit 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2-9-04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

On page 4, line 26, Applicant recites "Even when no water is deliberately added to the nonaqueous vehicle". It is the opinion of the Examiner that the word no in the sentence should be deleted.

On page 6, lines 27-28, Applicant recites "US Application Serial No. ___/ ___, ___ (filed concurrently herewith). The Examiner suggests amending this sentence to include the serial number or deleting the sentence.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3, 5-7, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wuzik et al (US 2004/0074018).

Wuzik et al teach a colorant composition which is used in a recording liquid containing in general a total of 0.1 to 50 percent by weight of mixture of dyes and 0 to 99 percent by weight water, 0.5 to 99.5 percent by weight organic solvent and/or humectant and ever more preferred 0.5 to 15 percent by weight dye mixture, 0 to 20 percent by weight water and 70 to 99.5 percent by weight organic solvent and/or humectant (page 4 para. 0058). The preferred embodiment reads on a nonaqueous ink composition. The reference further teaches that the magenta dye mixture can be used in an ink set ink combination with black, yellow and/or cyan colorants. The yellow and cyan colorants may include Pigment Yellow 120 (PY 120), Pigment Blue 15:3 (PB 15:3) and Pigment Blue 15:4 (PB 15:4). The viscosity and surface tension of the recording liquid places them within the ranges suitable for ink jet processes (page 4 para. 0064). The reference fails to teach Pigment Yellow 120, Pigment Blue 15:3 and Pigment Blue 15:4 in the ink set.

Therefore it would have been obvious to one of ordinary skill in the art that when ink composition is contains less than 20 percent water that the composition is nonaqueous and that when this ink composition is used in an ink set the entire ink set would be nonaqueous, to prevent incompatible among the inks. And it would also to

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obvious to use the Pigment Yellow 120 for the yellow ink and Pigment Blue 15:3 and Pigment Blue 15:4 for the cyan ink as Wuzik et al disclose that they may be used in the ink set.

Claims 1, 3, 5, 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi (US Patent 6,166,104) in view of Wuzik et al (US 2004/0074018).

Kobayashi teaches a hot melt ink jet process comprises ejecting at least yellow, magenta and cyan inks, comprises a yellow colorant, magenta colorant and cyan colorant respectively and mixing the colorant with a polyamide resin and wax (i.e. nonaqueous ink) (col. 2 lines 21-28). The wax is present in the amount of 20 to 90 percent by weight (col. 3 lines 43-45). The reference further teaches that the colorant present in the ink composition may be any dyes or pigments conventionally used in oil-based ink may be used. As for the pigments, those commonly used in the technical field of printing may be used without regard to organic or inorganic, which would include quinacridone pigments (col. 3 line 65-col. 4 line 13). The amount of colorant present in the ink composition is from 0.1 to 10 percent by weight (col. 4 lines 24-29). The reference fails to teach the specific pigment set forth in claims.

Wuzik et al is described above, and teaches that Pigment Yellow 120, Pigment Blue 15:3 and Pigment Blue 15:4 may be use in a nonaqueous ink composition.

Therefore it would have been obvious to one of ordinary skill in the art to use the pigments disclosed Wuzik et al in the ink composition of Kobayashi as Kobayashi teaches that any conventional pigment may be used.

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Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi (US Patent 6,166,104) in view of Wuzik et al (US 2004/0074018) as applied to claims 1, 3, 5, 6 and 9 above, and further in view of Takao et al (US 2002/0077383).

Kobayashi and Wuzik et al are described above, but fail to teach the specific pigments set forth in claims 2 and 4.

Takao et al teach an ink composition basically comprising a pigment, an organic solvent and a silicone graft polymer (i.e. nonaqueous ink) (page 1 para. 0011). The reference teaches that inorganic and organic pigments may be used alone or in combination of two or more such as quinacridones which including Pigment Red 202 and Pigment Violet 19 (page 2 para. 0017 and 0019).

Therefore it would have been obvious to one of ordinary skill in the art to use the pigments taught by Takao in the ink composition of Kobayashi in view of Wuzik et al because Kobayashi teaches that quinacridone may be used in nonaqueous ink composition.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wuzik et al (US 2004/0074018) as applied to claims 1, 3, 5-7, 9 above, and further in view of Lin (US Patent 6,475,271).

Wuzik et al is described above, but fails to teach the specific viscosity and surface tension set forth in claim 8.

Lin teaches a multicolor ink jet printing process comprising an ink jet ink composition comprising water, a colorant of pigment, dye or mixtures thereof and a low boiling point alcohol and/or thiol (col. 6 line 57-col. 7 line 12). The ink composition

further comprises a humectant and co-solvents (col. 9 lines 13+). The reference discloses in the examples that the surface tension and viscosity of the ink composition overlap Applicant's claimed range.

Therefore it would have been obvious to one of ordinary skill in the art for the ink composition (aqueous or nonaqueous) of Wuzik et al to have the surface tension and viscosity of that taught by Lin which teaches that a multicolor (ink set) ink jet composition which has a surface tension and viscosity which overlap Applicant's claimed range because Wuzik et al teaches that viscosity and surface tension of the recording liquid places them within the ranges suitable for ink jet processes.

Claim 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wuzik et al (US 2004/0074018) as applied to claims 1, 3, 5-7, 9 above, and further in view of Han-Adebekun et al (US Patent 6,644,799).

Wuzik et al is described above, but fails to teach the specific ink jet printing method of claim 10.

Han-Adebekun et al teaches a method comprising the steps of a) providing an ink jet printer that is responsive to digital data signals, b) loading the printer with a porous ink jet recording element having a 60°C specular gloss of at least about 5, c) loading the printer with a pigment based ink jet ink set comprising at least two inks and d) printing on the ink –recording element using the ink jet ink in response to the digital data signals (claim 27). The reference also teaches that the support can be any of those usually used for ink jet receivers (col. 6 lines 28-40).

Therefore it would have been obvious to one of ordinary skill in the art to use the ink composition as taught by Wuzik et al in the ink printing method as disclosed by Han-Adebekun et al because Han-Adebekun et al teaches a printing method comprises a pigmented multicolor ink set.

Conclusion

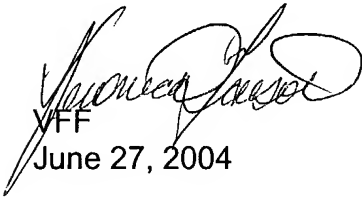
The remaining references listed on forms 892 and 1449 have been reviewed by the Examiner and are considered to be cumulative to or less material than the prior art references relied upon in the above rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Veronica F. Faison whose telephone number is 571-272-1366. The examiner can normally be reached on Monday-Thursday and alternate Fridays 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell can be reached on 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



YFF
June 27, 2004